



File Code: 3410

Date: December 7, 2016

Captain R.C. Valentine, Commanding Officer
Naval Weapons Station Earle
201 Highway 34, Building C-23
Colts Neck, NJ 07722-5031

Dear Captain Valentine:

For the last three years (2014-2016), Naval Weapons Station Earle (NWSE) has participated in Southern Pine Beetle (SPB) surveys conducted in New Jersey and coordinated by USDA Forest Service. The NJ Pine Barrens were once thought to be just north of the SPB range, but since 2009 SPB has been found killing pine trees in NJ and can now be found throughout the Pine Barrens region. Considering the increased threat from this tree killing insect and the pine resources of NWSE, the USDA Forest Service staff at the Morgantown Field Office has recommended that NWSE participate in trapping surveys.

The SPB surveys are done using Lindgren Funnel Traps baited with pheromone lures which are deployed in the early part of the SPB flight season. Two traps were placed in NWSE: one near an ordinance area and another near an administrative building. In 2016, the pheromone baits consisted of frontalinal, UHR-ethanol, and endo-brevicomin. Traps were hung from mid- to late-June and were collected once a week. Collections were sent to the Morgantown Field Office for identification and counting. Insects of interest that were counted include the SPB and its main predator in the region, checkered clerid beetles (CCB). Overall SPB catch numbers and the ratio of SPB to CCB is used to estimate population trends; when SPB numbers are high and are much larger than CCB numbers it is predicted that SPB numbers and subsequent tree mortality will increase, but when CCB numbers are much larger than SPB and or SPB numbers are low it is thought to be a predictor of low or decreasing SPB populations and tree mortality.

During both the 2014 and 2015 collecting periods, SPB trap catches were relatively low and CCB outnumbered SPB, indicating that SPB numbers were low and not anticipated to increase. In 2016, we collected a total of 28 SPB and 14 CCB over a 13 day trapping period in the two traps combined. Our average SPB catch per trap per day was just above one per day which is indicative of low or declining population levels (SPB catches need to be at least 6/day to be considered for a moderate or increasing classification). We would hope to catch more CCB than SPB also, but at these catch levels that is not a big concern. These trapping results are in line with what was seen on the ground at NWSE, as only one area of bark beetle-caused pine mortality was found, with mostly Ips (a less aggressive secondary bark beetle) galleries and a few SPB galleries found.



We offer Patricia Chizmadia our thanks and appreciation for her valuable assistance in this survey. We hope to continue to work with NWSE in this SPB trapping effort as it will assist NWSE in your future management decisions concerning SPB and will also help the US Forest Service assess the population trends of SPB in New Jersey. If you have any questions or comments regarding this survey, please contact Chris Hayes at (304) 285-1553.

Sincerely,

A handwritten signature in cursive script that reads "Robert Lueckel".

ROBERT LUECKEL
Field Representative

cc: Patricia Chizmadia, Natural Resources Specialist

CJH/mae